

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES**

In Re Application of:

Arturo A. Rodriguez

Serial No.: 09/709,145

Filed: November 10, 2000

Confirmation No.: 3251

Group Art Unit: 2623

Examiner: Lonsberry, Hunter B.

Docket No.: A-6655 (191930-1230)

For: **Method of Identifying Multiple Digital Streams within a Multiplexed Signal**

APPEAL BRIEF UNDER 37 C.F.R. §1.192

Mail Stop Appeal Brief - Patents
Commissioner of Patents and Trademarks
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

This is an appeal from the decision of Examiner Lonsberry, Hunter B., Group Art Unit 2623, mailed January 12, 2007, rejecting claims 1-8, 10-18 and 20-46 in the present application and making the rejection FINAL.

I. REAL PARTY IN INTEREST

The real party in interest of the instant application is Scientific-Atlanta, Inc., having its principal place of business at 5030 Sugarloaf Parkway, Lawrenceville, GA 30044. Scientific-Atlanta, Inc., the assignee of record, is wholly owned by Cisco Systems, Inc.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

III. STATUS OF THE CLAIMS

Claims 1-8, 10-18, and 20-46 are pending and stand rejected. Claims 9 and 19 stand cancelled. The Office Action has rejected all presently pending claims 1-8, 10-18, and 20-46, and Applicant hereby appeals the rejection of all pending claims. Applicant traverses these rejections and respectfully submits that the rejections of record are clearly not proper.

IV. STATUS OF AMENDMENTS

No amendments have been made or requested since the mailing of the FINAL Office Action and all amendments submitted prior to the FINAL action have been entered. A copy of the current claims is attached hereto in the Claims-Appendix in §IX.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Example embodiments of the claimed subject matter, among others, are summarized below with reference numbers and references to the written description ("specification") and drawings. The subject matter described below appears in the original disclosure at least where indicated, and may further appear in other places within the original disclosure.

Embodiments according to independent claim 1 describe a method for dynamically pricing viewing options in a digital broadband delivery system (see, e.g., 10 in FIG. 1). The method comprises the step of receiving bandwidth allocation information from a bandwidth allocation manager (see, e.g., 125 in FIG. 4). The bandwidth allocation information is related to an amount of bandwidth divided between at least a first service and a second service provided by the digital broadband delivery system to a plurality of digital home communication terminals (see, e.g., 14 in FIG. 4). The method further comprises the step of dynamically assigning a price criterion to each of a group of viewing options for a video program, each viewing option associated with a content delivery mode, the assignment based at least in part on the

bandwidth allocation information (see description at p.14 lines 13-29). This claim terminology may be understood with reference, for example, to p. 13, line 24 to p. 14, line 29 of the specification.

Embodiments according to independent claim 11 describe a pricing system (see, *e.g.*, 135 in FIG. 4) for a digital broadband delivery system ("DBDS", see, *e.g.*, 10 in FIG. 1). The digital broadband delivery system comprises a bandwidth allocation manager (see, *e.g.*, 125 in FIG. 4). The pricing system receives bandwidth allocation information from the bandwidth allocation manager. The bandwidth allocation information received is related to an amount of bandwidth divided between at least a first service and a second service provided by the digital broadband delivery system to a plurality of digital home communication terminals (see, *e.g.*, 14 in FIG. 1) and dynamically assigns a price criterion to each of a group of viewing options for a video program. Each viewing option is associated with a content delivery mode. The assignment is based at least in part on the bandwidth allocation information (see description at p.14 lines 13-29). This claim terminology may be understood with reference for example, to the inserted element indicator numerals of FIG. 1 and p. 6, lines 15-23, and of FIG. 4 and p. 14, lines 13-29.

Embodiments according to independent claim 20 describe a headend (see, *e.g.*, 26 in FIG. 1 and related description at p. 6, lines 33-37) in a digital broadband delivery system ("DBDS", see, *e.g.*, 10 in FIG. 1 and related description at p. 6 lines 1-24) comprising a bandwidth allocation manager (see, *e.g.*, 125 in FIG. 4) that determines a bandwidth allocation schedule by dynamically assigning one of a plurality of content delivery modes to each of a plurality of digital transmission channels (see, *e.g.*, 64, 68, 72 in FIG. 2 and related description at p. 8 lines 3-8, 15-21) for each of a plurality of time periods. The DBDS further comprising a pricing system (see, *e.g.*, 135 in FIG. 4) that receives bandwidth allocation information from the bandwidth allocation manager and dynamically assigns a price criterion to each of a group of viewing options based at least in part on the bandwidth allocation information received from the

bandwidth allocation manager (see description at p.14 lines 13-29). This claim terminology may be understood with reference for example, to the inserted element indicator numerals of FIG. 1 and p. 6, lines 1-37, p. 8 lines 3-8 and of FIG. 4 and p. 14, lines 13-29.

Embodiments according to independent claim 29 describe a digital broadband delivery system ("DBDS", see e.g., 10 in FIG. 1) comprising a bandwidth allocation scheduler that dynamically assigns one of a plurality of content delivery modes to each of a group of digital transmission channels (see, e.g., 64, 68, 72 in FIG. 2 and related description at p. 8 lines 3-8, 15-21) for each of a plurality of time periods. The DBDS further comprising a pricing system (see, e.g., 135 in FIG. 4) that receives bandwidth allocation information from the bandwidth allocation manager (see, e.g., 125 in FIG. 4) and dynamically assigns a price criterion to each of a group of viewing options based at least in part on the bandwidth allocation information (see description at p.14 lines 13-29). The DBDS further comprising a digital home communication terminal (see, e.g., 14 in FIG. 3) comprising an interface (see, e.g., 106 in FIG. 3) that receives a subscriber request regarding one of the group of viewing options and a tuner (see, e.g., 100, 102, 104 in FIG. 3) that transmits the subscriber request to the headend (see, e.g., 26 in FIG. 1). This claim terminology may be understood with reference for example, to the inserted element indicator numerals of FIG. 1 and p. 6, lines 1-37, p. 8, lines 3-8 and of FIG. 4 and p. 14, lines 13-29.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The Final Office Action rejected claims 1-7 and 10-17 under §103(a) as allegedly obvious over *Shah-Nazaroff et al.* (6,157,377) in view of *Gell et al.* (5,802,502) and *Blahut et al.* (5,532,735).

The Final Office Action rejected claims 20-26 and 28-44 under §103(a) as allegedly obvious over *Shah-Nazaroff et al.* in view of *Gell et al.* and *Son et al.*

The Final Office Action rejected claims 8 and 18 under §103(a) as allegedly obvious over *Shah-Nazaroff et al.* in view of *Gell et al.*, *Blahut et al.*, and *Candelore et al.* (6,057,872).

The Final Office Action rejected claim 27 under §103(a) as allegedly obvious over *Shah-Nazaroff et al.* in view of *Gell et al.*, *Blahut et al.*, *Son et al.*, and *Candelore et al.*

The Final Office Action rejected claims 45 and 46 under §103(a) as allegedly obvious over *Shah-Nazaroff et al.* in view of *Gell et al.*, *Blahut et al.*, *Son et al.*, and *Arsenault et al.* (6,701,528).

VII. ARGUMENT

A. Rejection of Claims 1-7 and 10-17 under 35 U.S.C. §103

The Final Office Action rejected claims 1-7 and 10-17 under §103(a) as allegedly obvious over *Shah-Nazaroff et al.* (6,157,377) in view of *Gell et al.* (5,802,502) and *Blahut et al.* (5,532,735). For at least the reasons set forth herein, Applicant respectfully disagrees with the rejection and requests that the rejection be overturned. Although Applicant believes independent claims 1 and 11 are patentably distinct, the errors in rejecting similar elements in rejected claims 1-7, and 10-17 are presented together here to facilitate review.

1. Discussion of the References

Blahut discloses an interactive television system which charges different prices for different video services. (Col. 5, lines 35-45.) Applicant assumes, for the sake of argument, that this teaching in *Blahut* corresponds to "dynamically assigning a price criterion to each of a group of viewing options for a video program, each viewing option associated with a content delivery mode". Even so, the price in *Blahut* is based on amount of advertising (Col. 5, lines 35-45) rather than being based on received "bandwidth allocation schedule information" as recited in independent claims 1 and 11.

Shah-Nazaroff discloses a system which “allows viewers to purchase upgraded media features. For instance, in one embodiment, a viewer at client system 110 who has ordered a pay-per-view movie can pay an additional fee”. (Col. 2, lines 20-25.) Applicant assumes, for the sake of argument, that this teaching in *Shah-Nazaroff* corresponds to “dynamically assigning a price criterion to each of a group of viewing options for a video program, each viewing option associated with a content delivery mode”. Even so, the price in *Shah-Nazaroff* is based on video quality (user pays more “to receive the movie at a higher video resolution and/or in digital Dolby surround sound rather than monotone audio”, Col. 2, lines 20-25) rather than being based on received “bandwidth allocation schedule information” as recited in independent claims 1 and 11.

Gell discloses a telecommunications system in which different service providers generate an estimated price for providing services and provide the price to user equipment, which selects a service provider on the basis of the price data. (Col. 1, lines 45-55.) The services may include video on demand. (Col. 12, lines 50-60.) Applicant assumes, for the sake of argument, that this teaching in *Gell* corresponds to “dynamically assigning a price criterion to each of a group of viewing options for a video program, each viewing option associated with a content delivery mode”. Even so, the price in *Gell* is based on cost, availability of resources, and prices charged by other providers. (Col. 4, line 60 to Col. 5, line 5) than being based on received “bandwidth allocation schedule information” as recited in independent claims 1 and 11.

Since the combination of references teaches prices based on something other than “bandwidth allocation schedule information”, then the Examiner’s rejection of claims 1-7 and 10-17 relies on both a) the references teaching “receiving bandwidth allocation information” and b) the references suggesting that this information is used to assign prices. Applicants show below how both prongs of the Examiner’s rejection are deficient.

Before discussing claimed features in more detail, Applicant notes that the phrase “bandwidth allocation schedule information” should not be considered alone. This phrase is

more fully defined in independent claims 1 and 11 as “describing a division of bandwidth, during a plurality of time periods, the division of bandwidth being between at least a first service and a second service provided by the digital broadband delivery system to a plurality of digital home communication terminals”. Applicant submits that the Examiner has dissected this feature into individual components, finding components in various portions of each reference, rather than understanding “bandwidth allocation schedule information” as a whole.

2. The References Do Not Teach “bandwidth allocation schedule information”

The Final Office Action alleges (p. 7, para. 4) that a teaching in *Blahut et al.* of providing advertisements to subscribers at specific times corresponds to “schedule information”. Even assuming, for the sake of argument, that this is true, the rejection should be overturned because independent claims 1 and 11 recite “bandwidth allocation schedule information” and the alleged “schedule” has nothing to do with “bandwidth allocation”. Furthermore, neither *Shah-Nazaroff et al.* or *Gell et al.* disclosed this claimed feature.

3. The References Do Not Teach “information describing a division of bandwidth during a plurality of scheduled periods”

The Final Office Action (p. 6, para. 3) admits that *Shah-Nazaroff et al.* does not disclose that the bandwidth allocation information is related to the bandwidth divided between services. However, the Final Office Action (p. 6, para. 4) alleges that *Gell et al.* teaches “bandwidth allocation schedule information describing a division of bandwidth during a plurality of scheduled periods” at Col. 4, line 34 to Col. 5, line 7. Applicant respectfully disagrees because that passage references “using stored average data indicating the typical demand for long distance telecommunications at the relevant time of day, possibly including consideration of the day type—holiday, working day, weekend”. First, these day types are not disclosed as scheduled periods. Second, even assuming, for the sake of argument, that a total amount of bandwidth can be computed from a number of calls expected in a particular time period, this total bandwidth is not equivalent to “information describing a division of bandwidth during a plurality

of time periods". Furthermore, if the bandwidth is computed from received information, the system in *Shah-Nazaroff et al.* does not receive the information, as is recited in independent claims 1 and 11.

4. The References Do Not Teach "information describing a division of bandwidth between at least a first service and a second service"

The Final Office Action (p. 7, para. 3) admits that *Shah-Nazaroff et al.* in view of *Gell et al.* does not teach "bandwidth allocation information". However, because the Final Office Action later contradicts this admission, Applicants will now address this feature. The Final Office Action (p. 7, para. 4) alleges that because *Blahut et al.* describes delivering video-on-demand services over a common medium, this corresponds to services divided between an available amount of bandwidth. Even assuming, for the sake of argument, that *Blahut et al.* does teach services divided between an available amount of bandwidth, the rejection should be overturned because such disclosure is not a teaching of "information describing a division of bandwidth between at least a first service and a second service". Furthermore, the system in *Shah-Nazaroff et al.* does not receive the information, as is recited in independent claims 1 and 11.

5. The References Do Not Teach "dynamically assigning a price criterion based at least in part on the bandwidth allocation schedule information"

The Final Office Action (p. 6, para. 4) appears to allege that a teaching of *Gell et al.* of dynamically generating prices corresponds to "dynamically assigning a price criterion based at least in part on the bandwidth allocation schedule information" at Col. 12, line 49 to Col. 13, line 2. Applicant respectfully disagrees because this passage references "selection circuit 912 evaluates the lowest 'adjusted' price...taking account of quality of service data and any stored data relating to previously encountered quality and price associated with suppliers having the same identity in the past."

First, Applicant respectfully disagrees that this quality of service data is related to bandwidth allocation schedule information. Second, even assuming, for the sake of argument,

that *Gell et al* teaches selecting a lowest price based on QoS and quality selections and that QoS is related to bandwidth, independent claims 1 and 11 recite “bandwidth allocation schedule information...describing a division of bandwidth during a plurality of time periods, the division of bandwidth being between at least a first service and a second service”.

As explained above, none of the cited references discloses “information describing a division of bandwidth”. Thus, the combination of references does not disclose, teach, or suggest “dynamically assigning a price criterion” based on “information describing a division of bandwidth” between services.

6. The Examiner's Combination is Deficient

The Examiner's rejection appears to have the following premises: a) *Blahut's* multiple services over a common medium corresponds to “division of bandwidth being between at least a first service and a second service”; b) either *Blahut's* VOD programming schedule or *Gell's* demand data collected on particular types of days corresponds to “division of bandwidth division of bandwidth, during a plurality of time periods”. Applicant argued above why these premises are false. However, even assuming they are true, the proposed combination does not result in the features recited in independent claims 1 and 11.

As discussed above (see Section VII.A.1), each of the references assigns prices in a particular way: *Blahut* assigns based on amount of advertising; *Shah-Nazaroff* assigns based on video quality; and *Gell* is based on availability of resources. Therefore, even these teaching are combined to produce “bandwidth allocation schedule information” (a point which Applicant does not concede), the result is still not a system which “dynamically assign[s] a price criterion...based at least in part on the bandwidth allocation schedule information”. The Examiner has shown no teaching or suggestion for modifying the references to assign prices in a manner which is different from that which each reference explicitly teaches, much less a

teaching or suggestion for modifying the references to assign prices in the manner recited in independent claims 1 and 11.

Since the proposed combination does not teach at least the above-described features recited in independent claims 1 and 11, a *prima facie* case establishing an obviousness rejection has not been made. Thus, claims 1 and 11 are not obvious under the proposed combination of *Shah-Nazaroff et al.*, *Gell et al.*, and *Blahut et al.*, and the rejection should be overturned.

7. Dependent Claims 2-7, 10, and 12-17

Since independent claims 1 and 11 are allowable for at least the reasons discussed above, dependent claims 2-7, 10, and 12-17 are allowable for at least the reason that each depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988).

B. Rejection of Claims 20-26 and 28-44 under 35 U.S.C. §103

The Final Office Action rejected claims 20-26 and 28-44 under 35 U.S.C. §103 as allegedly obvious over *Shah-Nazaroff et al.* (6,157,377) in view of *Gell et al.* (5,802,502), *Blahut et al.* (5,532,735), and *Son et al.* (6,697,376). For at least the reasons set forth herein, Applicant respectfully disagrees with the rejection and requests that the rejection be overturned. Although Applicant believes independent claims 20 and 29 are patentably distinct, the errors in rejecting similar elements in the rejected claims are presented together here to facilitate review.

1. Discussion of the References

Blahut discloses an interactive television system which charges different prices for different video services. (Col. 5, lines 35-45.) Applicant assumes, for the sake of argument, that this teaching in *Blahut* corresponds to “dynamically assigning a price criterion to each of a group of viewing options for a video program, each viewing option associated with a content delivery mode”. Even so, the price in *Blahut* is based on amount of advertising (Col. 5, lines 35-45)

rather than being based on received "bandwidth allocation information" as recited in independent claims 20 and 29.

Shah-Nazaroff discloses a system which "allows viewers to purchase upgraded media features. For instance, in one embodiment, a viewer at client system 110 who has ordered a pay-per-view movie can pay an additional fee". (Col. 2, lines 20-25.) Applicant assumes, for the sake of argument, that this teaching in *Shah-Nazaroff* corresponds to "dynamically assigning a price criterion to each of a group of viewing options for a video program, each viewing option associated with a content delivery mode". Even so, the price in *Shah-Nazaroff* is based on video quality (user pays more "to receive the movie at a higher video resolution and/or in digital Dolby surround sound rather than monotone audio", Col. 2, lines 20-25) rather than being based on received "bandwidth allocation information" as recited in independent claims 20 and 29.

Gell discloses a telecommunications system in which different service providers generate an estimated price for providing services and provide the price to user equipment, which selects a service provider on the basis of the price data. (Col. 1, lines 45-55.) The services may include video on demand. (Col. 12, lines 50-60.) Applicant assumes, for the sake of argument, that this teaching in *Gell* corresponds to "dynamically assigning a price criterion to each of a group of viewing options for a video program, each viewing option associated with a content delivery mode". Even so, the price in *Gell* is based on cost, availability of resources, and prices charged by other providers. (Col. 4, line 60 to Col. 5, line 5) than being based on received "bandwidth allocation information" as recited in independent claims 20 and 29.

Since the combination of references teaches prices based on something other than "bandwidth allocation information", then the Examiner's rejection relies on both a) the references teaching "receiving bandwidth allocation information" and b) the references suggesting that this information is used to assign prices. Applicants show below how both prongs of the Examiner's rejection are deficient.

2. The References Do Not Teach “bandwidth allocation manager” or “bandwidth allocation scheduler”

The Final Office Action alleges (p. 13, para. 3) that Blahut et al. teaches a “bandwidth allocation manager that determines a bandwidth allocation schedule by dynamically assigning one of a plurality of content delivery modes to each of a plurality of digital transmission channels for each of a plurality of time periods”. However, *Blahut et al.* appears to teach “timing schemes used in order to provide locations with their respective desired amount of advertisements”. Applicants respectfully submit that this teaching in *Blahut et al.* is not the same as a “bandwidth allocation manager that produces a bandwidth allocation schedule by dynamically assigning one of a plurality of content delivery modes to each of a plurality of digital transmission channels for each of a plurality of time periods” as recited in independent claim 20. Applicants also submit that this teaching in *Blahut et al.* is not the same as a “bandwidth allocation scheduler that dynamically assigns one of a plurality of content delivery modes to each of a plurality of digital transmission channels for each of a plurality of time periods” as recited in independent claim 29. Furthermore, neither *Shah-Nazaroff et al.*, *Gell et al.* nor *Son et al.* discloses these claimed features.

3. The References Do Not Teach “receiving bandwidth allocation information...describing a division of bandwidth during a plurality of scheduled periods”

The Final Office Action (p. 13, para. 3) alleges that *Blahut et al.* teaches “bandwidth allocation information...describing a division of bandwidth between the content delivery modes” at Col. 4, lines 13-41. Applicant respectfully disagrees. Even assuming this characterization of the reference is true, a teaching of the existence of a system that divides bandwidth between services does not disclose, teach, or suggest “bandwidth allocation information”, much less a “pricing system that receives bandwidth allocation information” as recited in independent claims 20 and 29.

4. The References Do Not Teach “dynamically assigns a price criterion to

each of a group of viewing options based at least in part on the bandwidth allocation information"

The Final Office Action (p. 11, para. 4) alleges that a teaching of *Gell et al.* of dynamically generating prices corresponds to "dynamically assigns a price criterion to each of a group of viewing options based at least in part on the bandwidth allocation information" at Col. 12, line 49 to Col. 13, line 2. Applicant respectfully disagrees because this passage references "selection circuit 912 evaluates the lowest 'adjusted' price...taking account of quality of service data and any stored data relating to previously encountered quality and price associated with suppliers having the same identity in the past." Applicant respectfully disagrees that this quality of service data is related to bandwidth allocation information. Thus, the combination of references does not disclose, teach, or suggest a "pricing system that....dynamically assigns a price criterion...based at least in part on the bandwidth information" as recited in independent claims 20 and 29.

5. The Examiner's Combination is Deficient

The Examiner's rejection appears to be premised on *Blahut's* delivery of different VOD services over a common medium corresponding to "information describing the division of bandwidth between the plurality of content delivery modes for each of the time periods" recited in independent claims 20 and 29. Applicant argued above why this premise is false. However, even assuming they are true, the proposed combination does not result in the features recited in claims 20 and 29.

As discussed above (see Section VII.A.1), each of the references assigns prices in a particular way: *Blahut* assigns based on amount of advertising; *Shah-Nazaroff* assigns based on video quality; and *Gell* is based on availability of resources. Therefore, even these teaching are combined to produce "bandwidth allocation information" (a point which Applicant does not concede), the result is still not a system which "dynamically assigns a price criterion...based at least in part on the bandwidth allocation information". The Examiner has shown no teaching or

suggestion for modifying the references to assign prices in a manner which is different from that which each reference explicitly teaches, much less a teaching or suggestion for modifying the references to assign prices in the manner recited in claims 20 and 29.

Since the proposed combination does not teach at least the above-described features recited in claims 20 and 29, a *prima facie* case establishing an obviousness rejection has not been made. Thus, claims 20 and 29 are not obvious under the proposed combination *Shah-Nazaroff et al.*, *Gell et al.*, *Son et al.*, and *Blahut et al.*, and the rejection should be overturned.

6. Dependent Claims 21-26, 28, and 30-44

Since independent claims 1, 11, and 29 are allowable for at least the reasons discussed above, dependent claims 21-26, 28, and 30-44 are allowable for at least the reason that each depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988).

C. Rejection of Claims 8 and 18 under 35 U.S.C. §103

The Final Office Action rejected dependent claims 8 and 18 under §103(a) as allegedly obvious over *Shah-Nazaroff et al.* in view of *Gell et al.*, *Blahut et al.* and *Candelore et al.* (6,057,872). *Candelore et al.* does not make up for the deficiencies of *Shah-Nazaroff et al.*, *Gell et al.*, and *Blahut et al.* described above. Therefore, dependent claims 8 and 18 are considered patentable under any combination of these references. Furthermore, since independent claims 1 and 11 are allowable for at least the reasons discussed above, dependent claims 8 and 18 are allowable for at least the reason that each depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988).

D. Rejection of Claim 27 Under 35 U.S.C. §103

The Final Office Action rejected claim 27 under §103(a) as allegedly obvious over *Shah-Nazaroff et al.* in view of *Gell et al.*, *Blahut et al.*, *Son et al.*, and *Candelore et al.* *Son et al.* and *Candelore et al.* do not make up for the deficiencies of *Shah-Nazaroff et al.*, *Gell et al.*, and

Blahut et al. described above. Therefore, dependent claim 27 is considered patentable under any combination of these references. Furthermore, since independent claim 20 is allowable for at least the reasons discussed above, dependent claim 27 is allowable for at least the reason that it depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988).

E. Rejection of Claims 45 and 46 Under 35 U.S.C. §103

The Final Office Action rejected claims 45 and 46 under §103(a) as allegedly obvious over *Shah-Nazaroff et al.* in view of *Gell et al.*, *Blahut et al.*, *Son et al.*, and *Arsenault et al.* (6,701,528). *Son et al.* and *Arsenault et al.* do not make up for the deficiencies of *Shah-Nazaroff et al.*, *Gell et al.*, and *Blahut et al.* described above. Therefore, dependent claims 45 and 46 are considered patentable under any combination of these references. Furthermore, since independent claim 29 is allowable for at least the reasons discussed above, dependent claims 45 and 46 are allowable for at least the reason that each depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988).

VIII. CONCLUSION

Based upon the foregoing discussion, Applicants respectfully requests that the Examiner's final rejection of claims 1-8, 10-18, and 20-46 be overturned by the Board, and that the application be allowed to issue as a patent with all pending claims.

In addition to the claims shown in the claims Appendix IX, Appendix X attached hereto indicates that there is no evidence being attached and relied upon by this brief. Appendix XI attached hereto indicates that there are no related proceedings.

The PTO is authorized to charge the \$500 fee for this Appeal Brief to the credit account identified in the accompanying credit card authorization form. No additional fee is believed to be due in connection with this appeal. If, however, any additional fee is deemed to be payable, you are hereby authorized to charge any such fee to deposit account 20-0778.

Respectfully submitted,

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IX. CLAIMS - APPENDIX

1. A method for dynamically pricing viewing options in a digital broadband delivery system, the method comprising:

receiving bandwidth allocation schedule information describing a division of bandwidth, during a plurality of time periods, the division of bandwidth being between at least a first service and a second service provided by the digital broadband delivery system to a plurality of digital home communication terminals; and

dynamically assigning a price criterion to each of a group of viewing options for a video program, each viewing option associated with a content delivery mode, the assignment based at least in part on the bandwidth allocation schedule information.

2. The method of claim 1, further comprising receiving a subscriber request related to at least one viewing option selected from the group of viewing options.

3. The method of claim 2, wherein receiving the subscriber request comprises receiving a subscriber request that comprises a request for a list of available viewing options.

4. The method of claim 2, further comprising transmitting a price criterion for the viewing option to the subscriber in response to the subscriber request.

5. The method of claim 1, wherein dynamically assigning the price criterion to a group of viewing options comprises dynamically assigning a price criterion to each of a group of viewing options, wherein the group of viewing options comprises one of a reservation option, a random access option, and an on-demand random access option.

6. The method of claim 5, wherein dynamically assigning a price criterion to a group of viewing options comprises dynamically assigning a price criterion to a group of viewing options

wherein the price criterion assigned to the random access option comprises a fee associated with a length of time that random access features are employed.

7. The method of claim 1, wherein dynamically assigning a price criterion to a group of viewing options comprises dynamically assigning a price criterion to a group of viewing options wherein the price criterion is based at least in part on one of subscriber profile data and subscriber priority data.

8. The method of claim 1, wherein dynamically assigning a price criterion to a group of viewing options comprises dynamically assigning a price criterion to a group of viewing options, wherein the price criterion comprises one of a subscriber incentive and a subscriber reward.

9. (Canceled)

10. The method of claim 1, further comprising sending the assigned price criterion for at least one of the group of viewing options to a subscriber.

11. A pricing system for a digital broadband delivery system wherein the digital broadband delivery system comprises a bandwidth allocation manager and wherein the pricing system receives bandwidth allocation schedule information describing a division of bandwidth, during a plurality of time periods, the division of bandwidth being between at least a first service and a second service provided by the digital broadband delivery system to a plurality of digital home communication terminals, and dynamically assigns a price criterion to each of a group of viewing options for a video program, each viewing option associated with a content delivery mode, the assignment based at least in part on the bandwidth allocation information.

12. The pricing system of claim 11, wherein the pricing system receives a subscriber request related to at least one viewing option selected from the group of viewing options.

13. The pricing system of claim 12, wherein the subscriber request received by the pricing system comprises a request for a list of available viewing options.

14. The pricing system of claim 12, wherein the pricing system transmits at least one price criterion to the subscriber in response to the subscriber request.

15. The pricing system of claim 11, wherein the group of viewing options comprises one of a reservation option, a random access option, and an on-demand random access option.

16. The pricing system of claim 15, wherein price criterion assigned to the random access option comprises a fee associated with a length of time that random access features are employed.

17. The pricing system of claim 11, wherein the price criterion for at least one viewing option selected from the group of viewing options is based at least in part on at least one of subscriber profile data and subscriber priority data.

18. The pricing system of claim 11, wherein the price criterion for at least one viewing option selected from the group of viewing options comprises one of a subscriber incentive and a subscriber reward.

19. (Canceled)

20. A headend in a digital broadband delivery system comprising:
a bandwidth allocation manager that produces a bandwidth allocation schedule by dynamically assigning one of a plurality of content delivery modes to each of a plurality of digital transmission channels for each of a plurality of time periods, resulting in a division of bandwidth between the plurality of content delivery modes for each of the time periods; and

a pricing system that receives bandwidth allocation information, from the bandwidth allocation manager, describing the division of bandwidth between the content delivery modes, and that dynamically assigns a price criterion to each of a group of viewing options based at least in part on the bandwidth allocation information received from the bandwidth allocation manager.

21. The headend of claim 20, wherein the pricing system receives a subscriber request related to at least one viewing option selected from the group of viewing options.

22. The headend of claim 21, wherein the subscriber request received by the pricing system comprises a request for a list of available viewing options.

23. The headend of claim 21, wherein the pricing system transmits at least one price criterion to the subscriber in response to the subscriber request.

24. The headend of claim 20, wherein the group of viewing options comprises one of a reservation option, a random access option, and an on-demand random access option.

25. The headend of claim 24, wherein price criterion assigned to the random access option comprises a fee associated with the length of time that random access features are employed.

26. The headend of claim 20, wherein the price criterion for at least one viewing option selected from the group of viewing options is based at least in part on one of subscriber profile data, subscriber priority data, and subscriber priority data.

27. The headend of claim 20, wherein the price criterion for at least one viewing option selected from the group of viewing options comprises one of a subscriber incentive and a subscriber reward.

28. The headend of claim 20, wherein the bandwidth allocation information comprises information from the bandwidth allocation schedule.

29. A digital broadband delivery system comprising:

a bandwidth allocation scheduler that dynamically assigns one of a plurality of content delivery modes to each of a group of digital transmission channels for each of a plurality of time periods, resulting in a division of bandwidth between the plurality of content delivery modes for each of the time periods;

a pricing system that receives bandwidth allocation information, from the bandwidth allocation manager, describing the division of bandwidth between the content delivery modes, and that dynamically assigns a price criterion to each of a group of viewing options based at least in part on the bandwidth allocation information; and

a digital home communication terminal comprising an interface that receives a subscriber request regarding one of the group of viewing options and a tuner that transmits the subscriber request to the headend.

30. The digital broadband delivery system of claim 29, wherein the digital home communication terminal further comprises an interface for displaying a price criterion received from the headend in response to the subscriber request.

31. The digital broadband delivery system of claim 29, wherein the digital home communication terminal further comprises an interface for displaying a menu comprising at least two viewing options selected from the group of viewing options and the price criteria assigned to the at least two viewing options.

32. The digital broadband delivery system of claim 29, wherein the digital home communication terminal further comprises an interface for displaying an indication of usage of a

viewing option.

33. The digital broadband delivery system of claim 32, wherein the interface for displaying an indication of usage of a viewing option comprises an interface for displaying one of elapsed time, time remaining, and cost incurred through use of a viewing option.

34. The digital broadband delivery system of claim 32, wherein the interface for displaying an indication of usage of a viewing option comprises an interface for displaying the indication of usage of a viewing option intermittently.

35. The digital broadband delivery system of claim 32, wherein the interface for displaying an indication of usage of a viewing option comprises an interface for displaying the indication of usage of a viewing option in response to the occurrence of a predefined event.

36. The digital broadband delivery system of claim 35, wherein the predefined event comprises one of a change in usage of a viewing option, use of a random access feature associated with a viewing option, and expiration of an elapsed time period.

37. The digital broadband delivery system of claim 29, wherein the digital home communication terminal further comprises an interface for displaying an indication of an available alternate viewing option.

38. The digital broadband delivery system of claim 37, wherein the interface for displaying an indication of an available alternate viewing option comprises a selectable icon representing a menu of available alternate viewing options.

39. The digital broadband delivery system of claim 37, wherein the interface for displaying an indication of an available alternate viewing option comprises an interface for displaying the indication of an available alternate viewing option in response to the occurrence

of a predefined event.

40. The digital broadband delivery system of claim 37, wherein the predefined event comprises one of a change in usage of a viewing option, use of a random access feature associated with a viewing option, expiration of an elapsed time period, and a change in available alternate viewing options.

41. The digital broadband delivery system of claim 29, wherein the subscriber request received by the digital home communication terminal comprises one of a request for a price criterion for a viewing option, a request for viewing a program according to a viewing option, and a request for a list of available viewing options.

42. The digital broadband delivery system of claim 29, wherein the group of viewing options comprises one of a reservation option, a normal-play option, a random access option, an on-demand random access option, and an adjust preference option.

43. The digital broadband delivery system of claim 42, wherein the price criterion assigned to the random access option comprises a fee associated with a length of time that random access features are employed.

44. The digital broadband delivery system of claim 29, wherein the price criterion for at least one viewing option selected from the group of viewing options is based at least in part on one of subscriber profile data, subscriber priority data, time of bandwidth consumption, and a subscriber viewing time preference.

45. The digital broadband delivery system of claim 29, wherein the digital home communication terminal further comprises a storage device for storing content associated with a viewing option.

46. The digital broadband delivery system of claim 45, wherein the digital home communication terminal downloads content associated with a viewing option during a time period of low bandwidth consumption and stores the content in the storage device for later retrieval.

X. EVIDENCE - APPENDIX

None.

XI. RELATED PROCEEDINGS - APPENDIX

None.